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ABSTRACT

This report identifies some of the relative advantages and disadvantages enjoyed by differing language groups in the Toronto school system. Eight groups of students were selected and studied in an attempt to determine whether cultural differences produce distinct patterns of performance on a variety of measures. The groups selected represent the Chinese, French, German, Greek, Italian, Polish, Portuguese, and Ukrainian cultures. The patterns of performance in grades 5, 7, and 9 indicate that areas of strength and weakness vary with grade as well as with cultural background. The findings suggest the extent and nature of the difficulties for students who must learn English as a second language. Several charts of statistical data are included. (RL)

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LANGUAGE BACKGROUNDS AND ACHIEVEMENT IN TORONTO SCHOOLS

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E. N. Wright

February, 1970

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INTRODUCTION

A diversity of language groups are represented in the Toronto schools. It was almost inevitable that when there was a large scale study of students who learned English as a second language, questions would be raised about the various language groups. At the meeting of the Special Committee re Educating New Canadians, June 20, 1969, trustees were assured that such questions would be examined in a forthcoming report.

Comparing language groups on such factors as ability or achievement requires certain qualifications. It would be meaningless to compare all Italian with all Polish students without controlling such basics as age and grade. However, such basic factors as grade and age are not sufficient to describe the variations in performance of students in Toronto whose mother tongue is not English.

It was noted in a previous report[1] that 38.5 per cent of students in grades five, seven and nine did not learn English as a first language: some were born in Canada, others arrived while they were infants, others arrived after having started school in another land. Because of such background factors[2] it is necessary to subdivide the students within each specific language group. For example, in

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1 Ramsey, C. A., & Wright, E. N. Students of non-Canadian origin: A descriptive report of students in Toronto schools. Toronto: The Board of Education for the City of Toronto, Research Department, 1969 (#60).

2 Ramsey, C. A., & Wright, E. N. Students of non-Canadian origin: The relation of language and rural-urban background to academic achievement and ability. Toronto: The Board of Education for the City of Toronto, Research Department, 1969 (#76).

looking at German speaking students, it is necessary to distinguish between students who were born in Canada and learned German as a first language and students born outside Canada and learned German as a first language.

Furthermore, since students "not born in Canada" arrived at various ages, this factor should be controlled also. Another report[3] investigating the relation of age on arrival to achievement found it useful to separate the non-Canadian born students into early arriving and late arriving groups. Early arrivers were defined as those who arrived under the age of seven years, and late arrivers were those seven years and older on arrival.

These restrictions, which allow more meaningful statements to be made, result in the following subdivisions for each language group:[4]

"B" -- Students born in Canada who learned English as a second language. These students can be thought of as "second generation" immigrants.

"D_e" -- Students born outside Canada who learned English as a second language, and who arrived in Canada at 6 years of age or younger.

"D_l" -- Students born outside Canada who learned English as a second language, and who arrived in Canada at 7 years of age or older.

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3 Ramsey, C. A., & Wright, E. N. Students of non-Canadian origin: Relation of age on arrival to academic achievement and ability. Toronto: The Board of Education for the City of Toronto, Research Department, 1970 (in preparation).

4 The designation of "B" and "D" is consistent with designations used in parallel reports.

Because immigrants leave their land of birth for different reasons, students in the various subgroups cannot and must not be considered representative of their country, and indeed this report is based on language spoken rather than country of birth. A second important qualification must be noted: reasons for migration change, immigration policies change and yesterday's immigrants are not necessarily going to be like tomorrow's immigrants.

PROCEDURES

This report will attempt to identify some of the relative advantages and disadvantages enjoyed by differing language groups (and by the types of students within them). If clearly defined patterns exist within any language group, then some conclusions may be drawn to assist in planning the students' curricula.

Table 1 shows the number of bilingual students, by grade, as described in the above categorizations. Within each cell (i.e. group by grade) as many as 26 languages may be represented. The Student Background Questionnaire[5] from which the language information was obtained, contained a check list of 26 languages but some languages were checked by few, or even none of the students. Frequencies for each language group are reported in the Appendix. Where there seemed to be "adequate" representation at one or more grade levels, a language group was selected for inclusion in the analyses. Table 2 indicates which language groups were selected. Although only eight language groups were selected, an examination of Tables 3 to 5 in the Appendix shows that at some grade levels a language group may be represented by only a few students. This limitation is most apparent for the Greeks, born in Canada, where there are 30 in grade five but only 5 in grade seven and 6 in grade nine.

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5 Ramsey, C. A., & Wright, E. N. Students of non-Canadian origin: A descriptive report of students in Toronto schools. Toronto: The Board of Education for the City of Toronto, Research Department, 1969 (#60).

TABLE 1

NUMBER OF STUDENTS IN THE BILINGUAL GROUPS: BY GRADE

Group	Grade 5	Grade 7	Grade 9	Totals
B - second generation	401	263	280	944
D_e - early arrival	172	160	225	557
D_l - late arrival	215	136	251	602
Totals	788	559	756	2103

TABLE 2

LANGUAGE GROUPS SELECTED ON THE CRITERION OF ADEQUATE REPRESENTATION

	Bilingual Student Cateogory		
	B (Second Generation)	D_e (Early Arrival)	D_l (Late Arrival)
LANGUAGES	Chinese	----------	Chinese
	French	----------	----------
	German	German	----------
	Greek	Greek	Greek
	Italian	Italian	Italian
	Polish	----------	----------
	---------	Portuguese	Portuguese
	Ukrainian	----------	----------

As Table 2 indicates, it was not possible to represent the major language groups in each category. The bilingual, second generation category (B) contains seven different language groups but only four are contained in each of groups D_e and D_1. This variation reflects: (a) a relatively steady and heavy flow of immigrants speaking Greek and Italian; and (b) a shifting pattern of immigration for some of the other language groups. These figures do not represent total immigration to Toronto as they do not, for one thing, include separate school data. In addition, students born in Canada, learning English as a second language, might include a few third generation immigrants.

The basic analysis of the data consisted of the calculation of mean scores for students in each selected language group, by grade.

Student scores were available on ten measures which have been described elsewhere[6]. They were:

Picture Vocabulary (P.V.)
Computational Skill (C.S.)
Progressive Matrices (P.M.)
Teacher Ratings (T.R.)
and a six part test of basic English Skills (I to VI).

To examine meaningfully the resulting 450 means that were calculated, all means were converted to a common base (unit normal deviates) and expressed graphically. To place these analyses in context, performance is reported with reference to the average performance of all the students at each grade level.

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6 Ramsey, C. A., & Wright, E. N. Students of non-Canadian origin: A descriptive report of students in Toronto schools. Toronto: The Board of Education for the City of Toronto, Research Department, 1969 (#60).

RESULTS

The first eight figures show the average scores of the selected language groups by grade and student category on four of the test measures, i.e. P.V., C.S., P.M. and T.R. (the second group of eight figures present data on the subtests of English skills).

NOTE TO READER: In these figures the points representing average performance on each test have been connected like a graph, for each group, e.g.,

B •——•——•

D_e •.....•.....•

D_l •----•-----•

This procedure implies a scale on the horizontal axis, i.e. a continuum on some variable. Obviously, the four different tests (P.V., C.S., P.M., T.R.) shown in Figures 1 to 8 are discrete variables and could be shown in any order.

The points for each test were joined to facilitate making visual comparisons of the similarities or variations among groups and among grades. Thus, a set of four points in any grade joined by a line (solid or dotted) represents a pattern of performance for a specific group of students.

No statistical tests have been applied to the data. Because of the small numbers in some groups very large differences would be required to achieve statistical significance; whenever a point is within ± .4 from the grade mean it is unlikely that one is seeing more than chance variation; in some instances a difference of at least .8 between two points is required to achieve significance. On the other hand, when

clearly defined patterns are present some confidence can be placed in them essentially because there are several means sharing the same relationship.

At this point the reader is invited to study the figures carefully. The following observations are subjective statements based on a similar examination of the figures by the authors; other additional observations may be apparent to the reader. He may want also to confirm the authors' observations.

"Second Generation" Students (Group B)

Three of the language groups (French, Ukrainian and Polish) were represented only by "second generation" students, Group B. For this reason it is worthwhile to look at them in relation to Group B for the other language groups, Figures 1 to 8 (Figure 7, Portuguese, does not have a Group B). It will be observed that most of these students, on most measures, perform above the grade average. In grades five and seven there is little variability among the scores on the different tests, although exceptions to this generalization for grades five and seven are observable for the Chinese and for the five Greeks in grade seven. In grade nine, however, a distinct change is noticeable, with the scores on the Picture Vocabulary Test (P.V.) being markedly superior. The lack of variability in grades five and seven might reflect acculturation, i.e. they are similar to all Canadian born students. No explanation is suggested for the consistent outstanding grade nine performance on the Picture Vocabulary Test.

Chinese (Figure 1)

The students who learned Chinese as a mother tongue show a distinctive pattern not found among the other students who spoke European languages. The focus, it is reported, is on patterns of scores. If the students, born in Canada (i.e. Group B), and the recent immigrants (early

arrivals were too few to be included), i.e. Group D_1 show a similar pattern then one suspects that some cultural factor is affecting performance. The Chinese students are most successful on the tests of Computational Skills and the Progressive Matrices; their ratings by teachers are lower and their scores on the Picture Vocabulary are very low. Since the words for the Picture Vocabulary Test were administered orally, it is worthwhile noting in Figure 9 the great difficulty these students had with sound discrimination. This difficulty apparently is overcome by grade nine for those students born in Canada.

German (Figure 3)

There were not enough recent immigrants to provide data for all three categories. It is apparent that both those born in Canada and those who immigrated at an early age show similar patterns of performance in grades seven and nine. In grade five the students born outside Canada tend to have lower Picture Vocabulary Scores. The pattern generally is one that shows above average scores with no specific area of strength or weakness except for the outstanding grade nine performance on the Picture Vocabulary Test.

Greek (Figure 4)

All three categories of Greek students are represented, although this was done at the expense of including some groups where there were few students. This may account for the fact that the only clear pattern is seen in grade five. Here Computational Skills are consistently the strongest area and Picture Vocabulary the weakest area.

Italian (Figure 5)

The Italian students are the most adequately represented in terms of numbers. All three groups show a similar pattern in grade five

with those born in Canada showing the least variability. In grade nine again all three groups show a similar pattern but a pattern that is totally different from the pattern in grade five. Picture Vocabulary changes from a weakness in grade five to a strength in grade nine and Computational Skills moves from a strong position to a weak position, especially relative to Teacher's Ratings.

Portuguese (Figure 7)

There were not enough "second generation" Portuguese students to include in this figure. The patterns in grades five and nine and indeed the mixed pattern in grade seven are very similar to the Italian patterns. The gains in Picture Vocabulary are great as are the gains in Teacher's Ratings. Computational Skills does not occupy as predominant a position for the grade five Portuguese as it does for the grade five Italians.

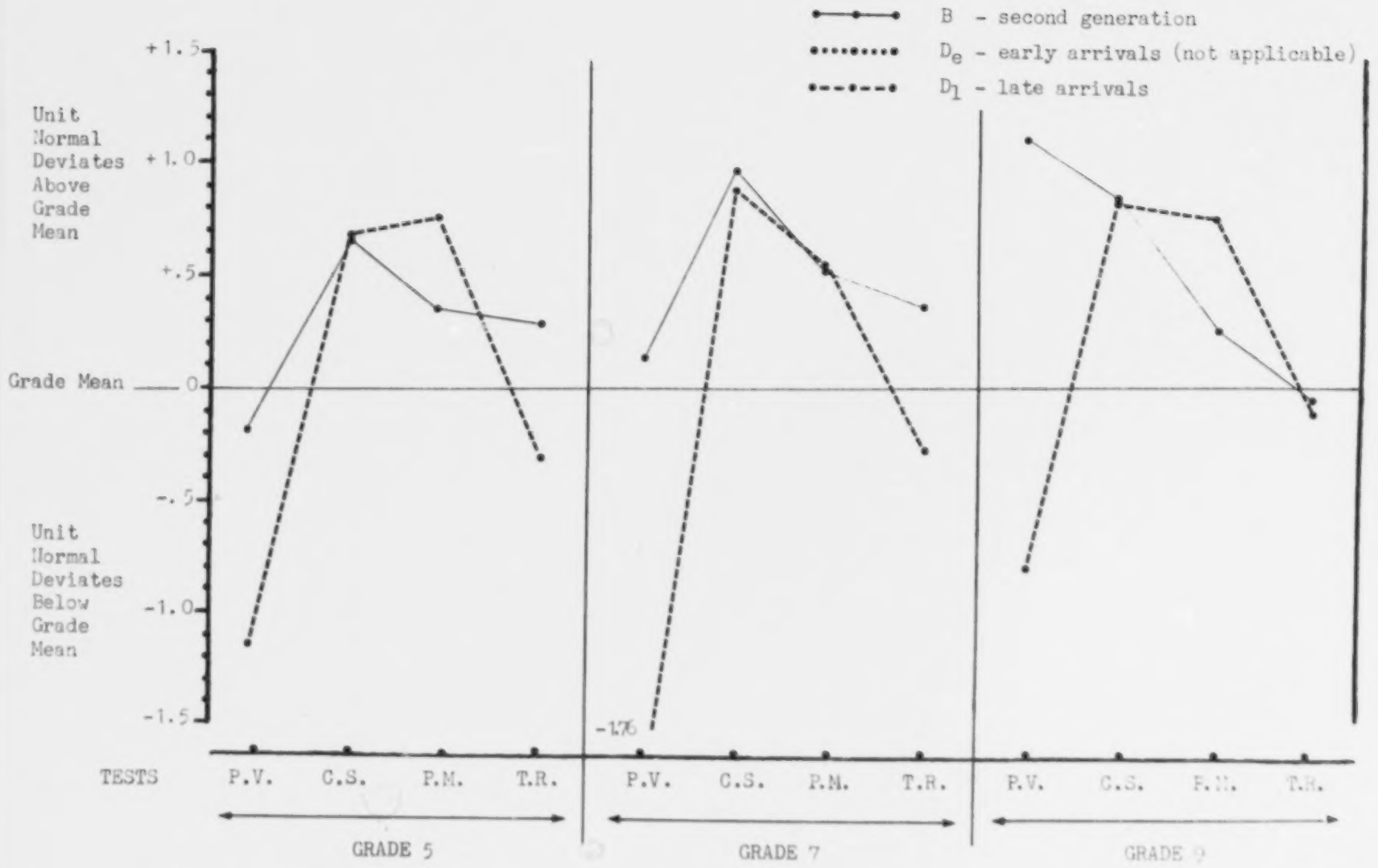

Fig. 1. Test performance of students for whom CHINESE was their mother tongue. The arrangement of the four tests, P.V. (Picture Vocabulary), C.S. (Computational Skills), P.M. (Progressive Matrices), and T.R. (Teacher's Ratings of Students) is arbitrary and the points have been joined to facilitate identification of patterns of performance.

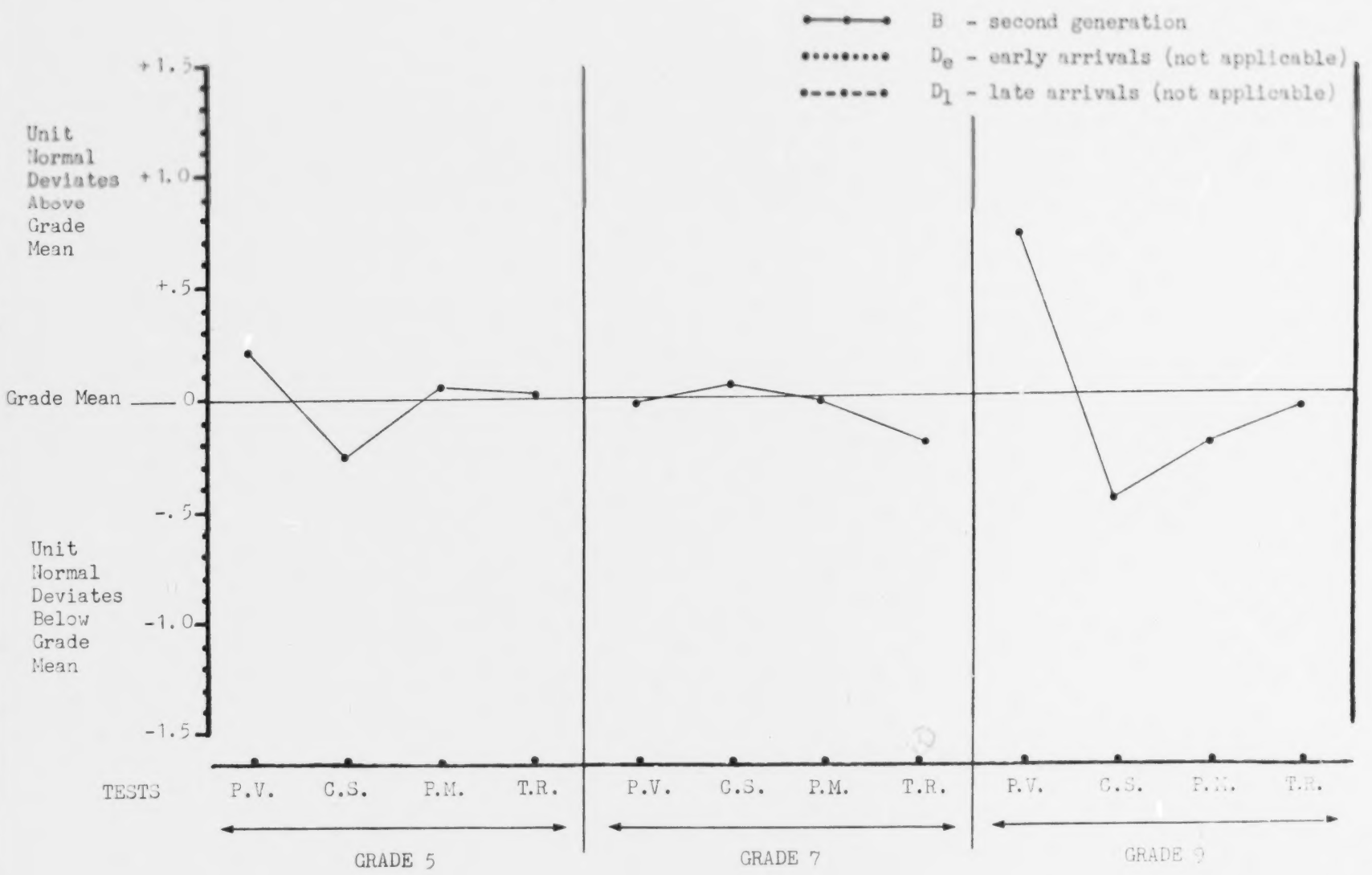

Fig. 2. Test performance of students for whom FRENCH was their mother tongue. The arrangement of the four tests, P.V. (Picture Vocabulary), C.S. (Computational Skills), P.M. (Progressive Matrices), and T.R. (Teacher's Ratings of Students) is arbitrary and the points have been joined to facilitate identification of patterns of performance.

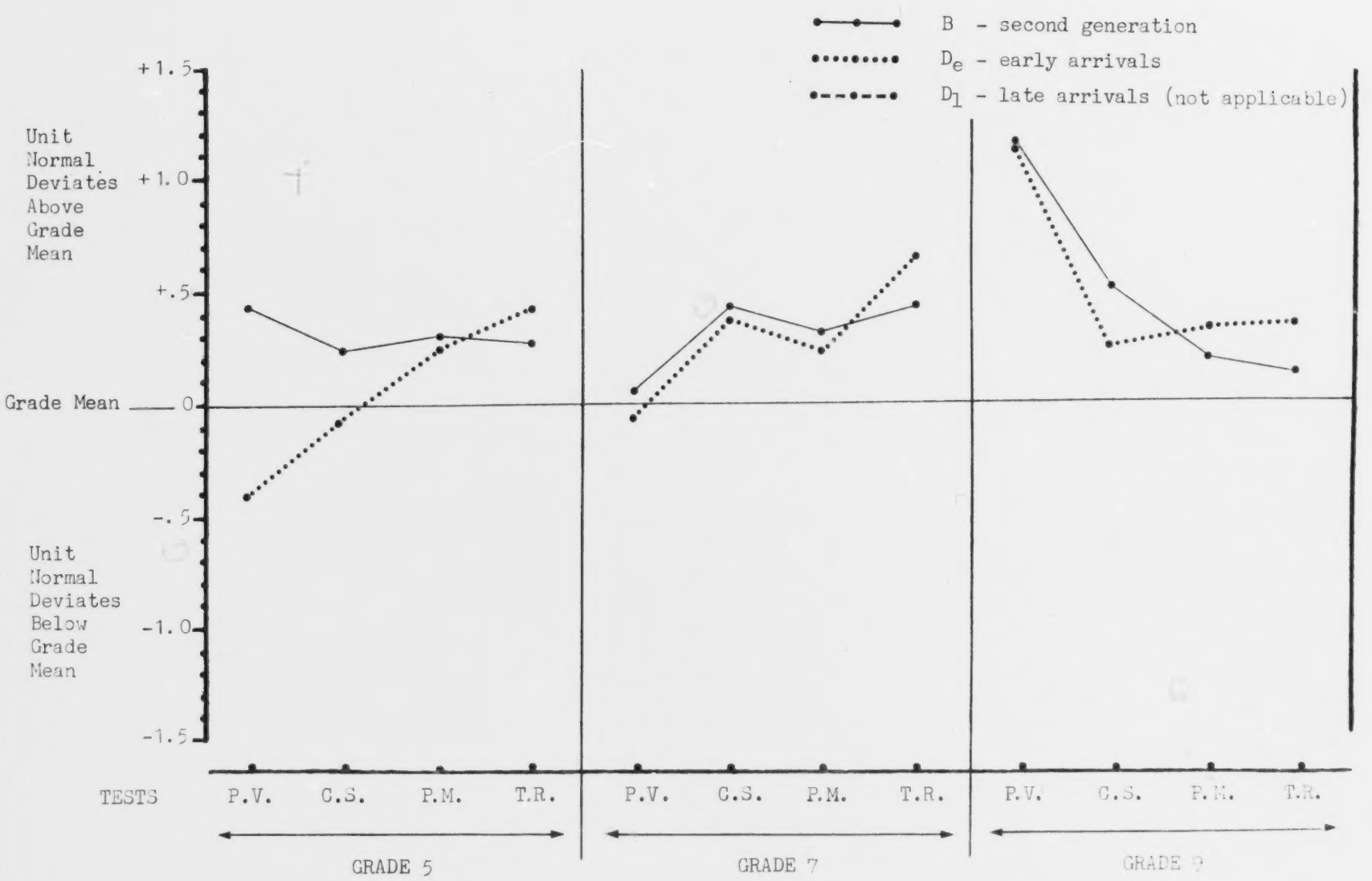

Fig. 3. Test performance of students for whom GERMAN was their mother tongue. The arrangement of the four tests, P.V. (Picture Vocabulary), C.S. (Computational Skills), P.M. (Progressive Matrices), and T.R. (Teacher's Ratings of Students) is arbitrary and the points have been joined to facilitate identification of patterns of performance.

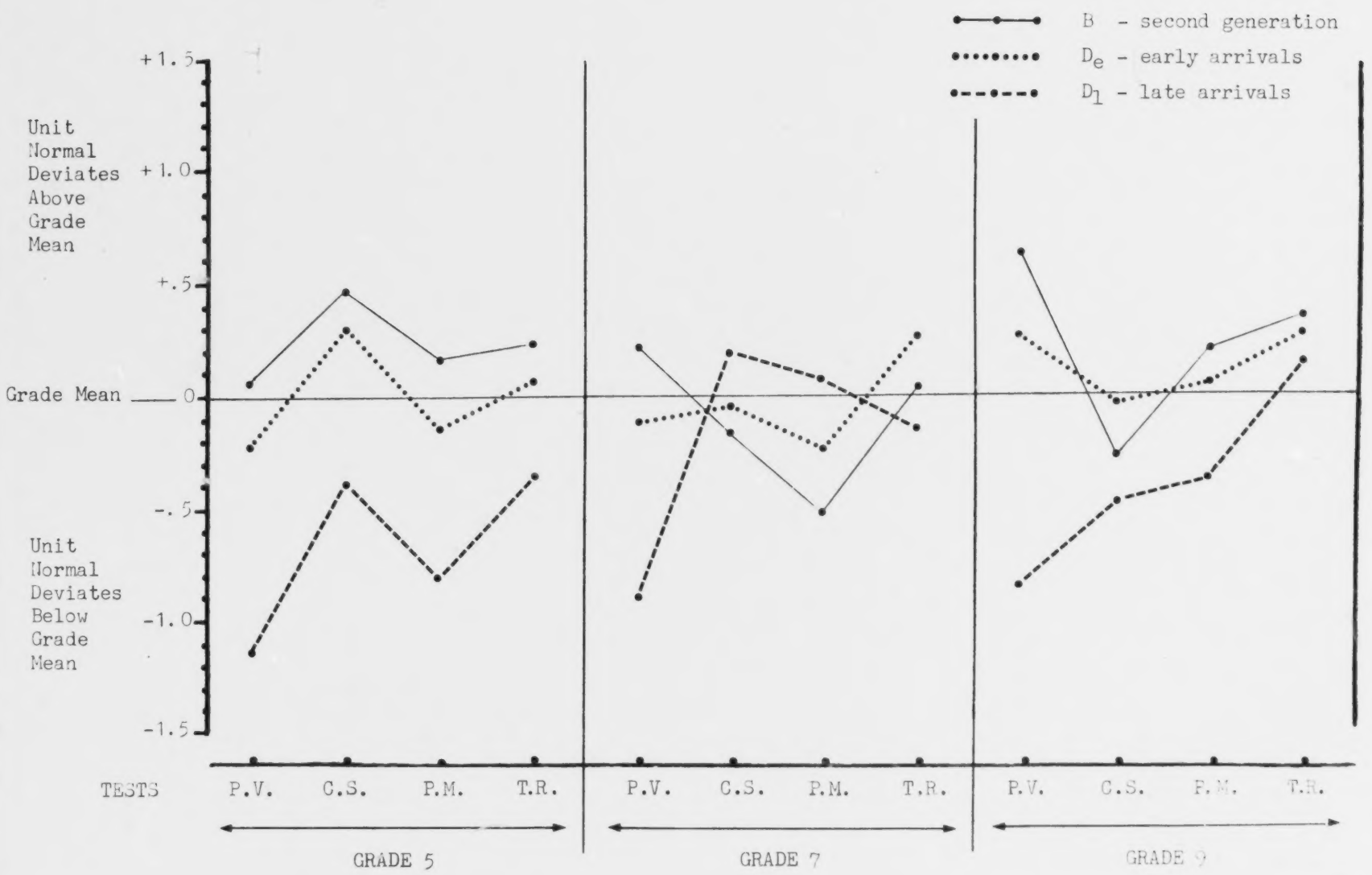

Fig. 4. Test performance of students for whom GREEK was their mother tongue. The arrangement of the four tests, P.V. (Picture Vocabulary), C.S. (Computational Skills), P.M. (Progressive Matrices), and T.R. (Teacher's Ratings of Students) is arbitrary and the points have been joined to facilitate identification of patterns of performance.

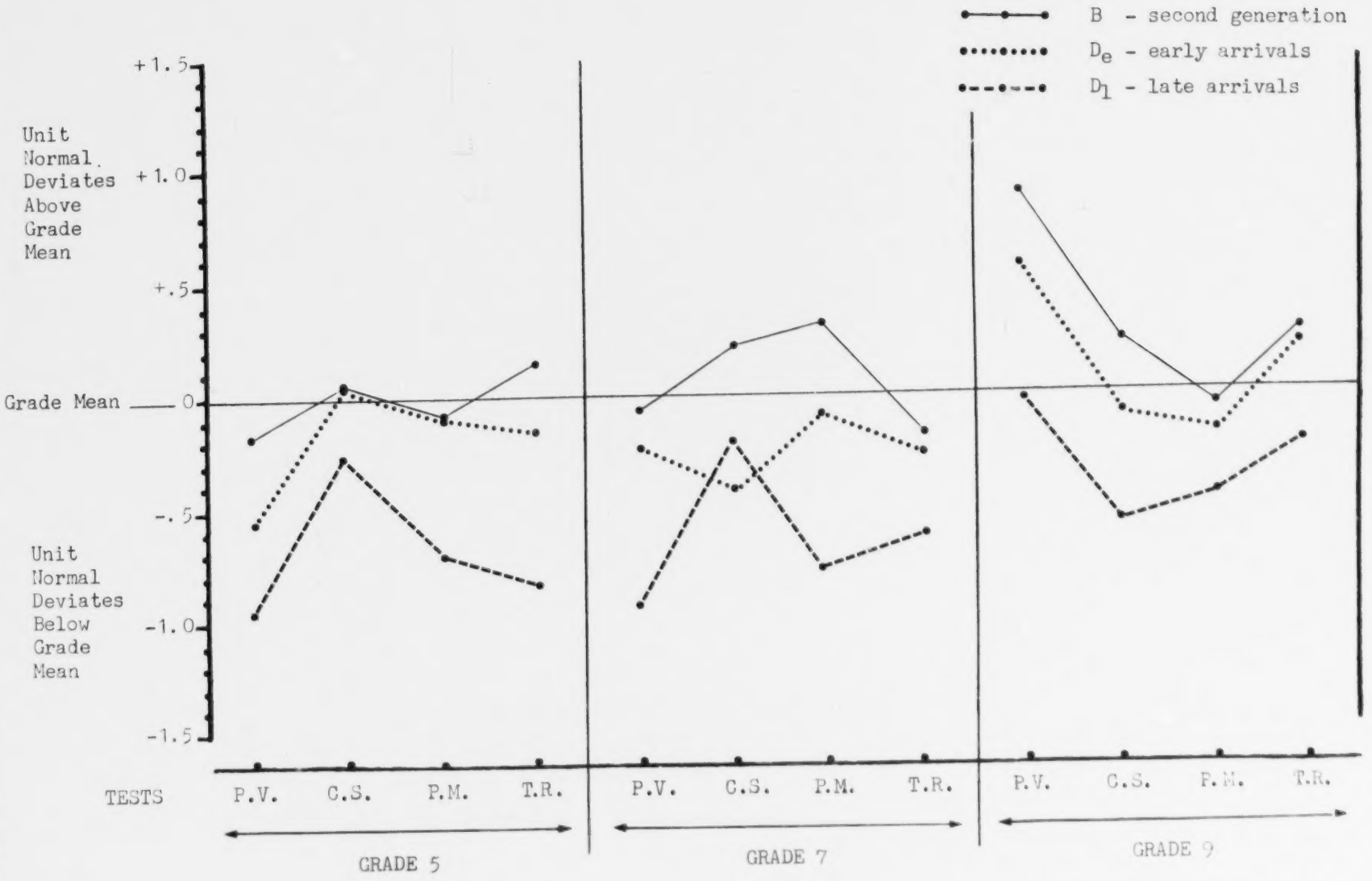

Fig. 5. Test performance of students for whom ITALIAN was their mother tongue. The arrangement of the four tests, P.V. (Picture Vocabulary), C.S. (Computational Skills), P.M. (Progressive Matrices), and T.R. (Teacher's Ratings of Students) is arbitrary and the points have been joined to facilitate identification of patterns of performance.

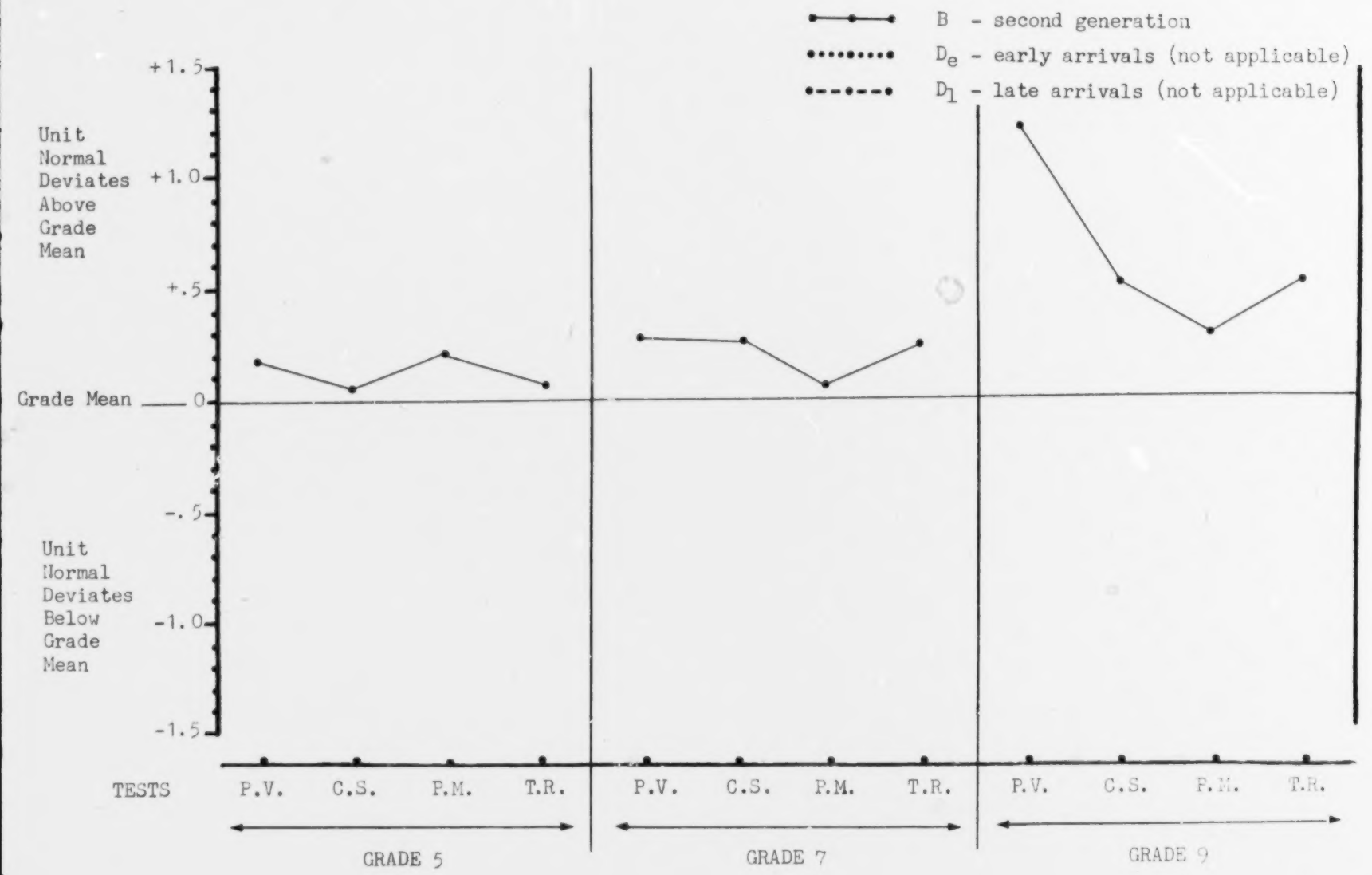

Fig. 6. Test performance of students for whom POLISH was their mother tongue. The arrangement of the four tests, P.V. (Picture Vocabulary), C.S. (Computational Skills), P.M. (Progressive Matrices), and T.R. (Teacher's Ratings of Students) is arbitrary and the points have been joined to facilitate identification of patterns of performance.

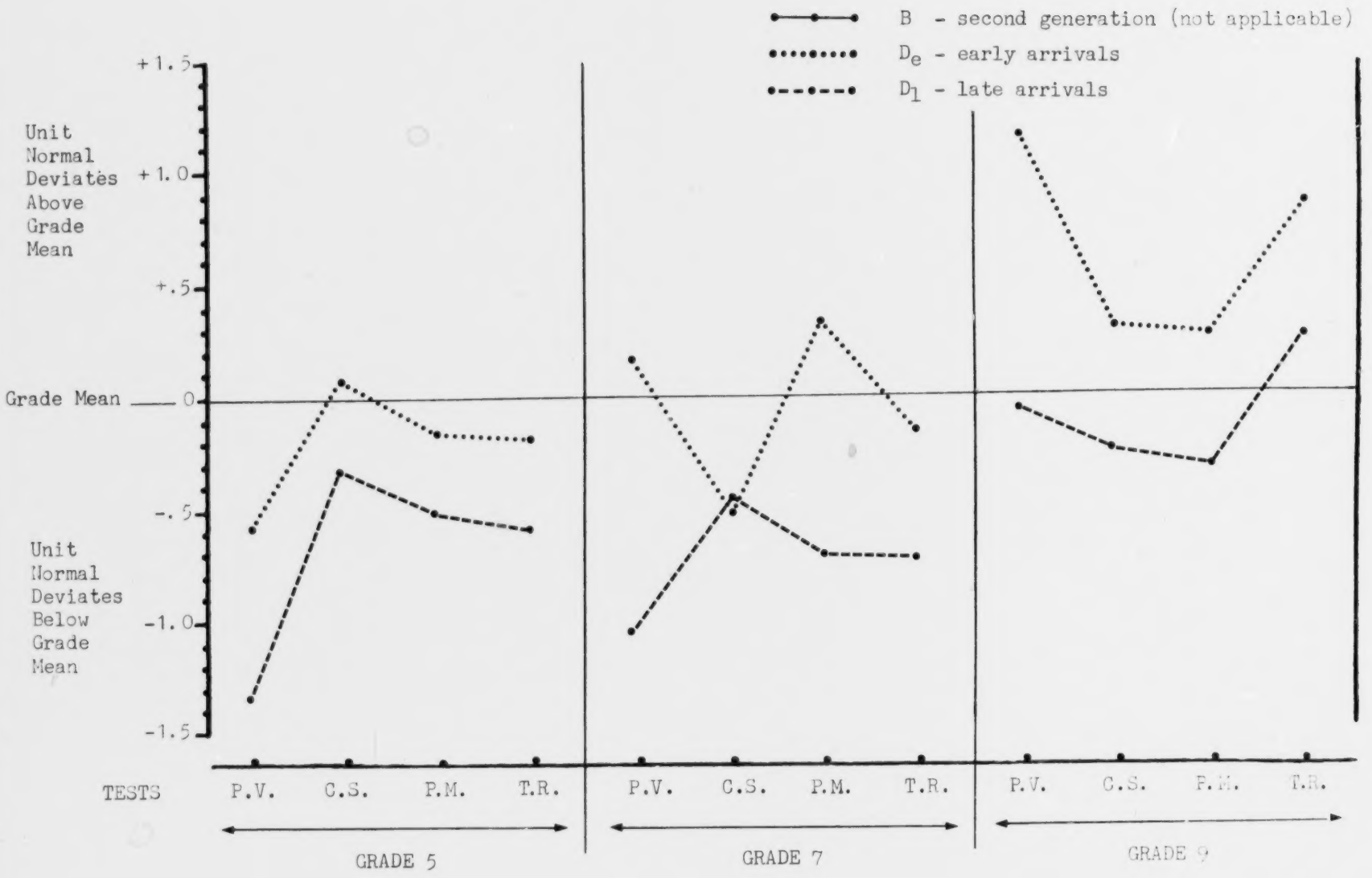

Fig. 7. Test performance of students for whom PORTUGUESE was their mother tongue. The arrangement of the four tests, P.V. (Picture Vocabulary), C.S. (Computational Skills), P.M. (Progressive Matrices), and T.R. (Teacher's Ratings of Students) is arbitrary and the points have been joined to facilitate identification of patterns of performance.

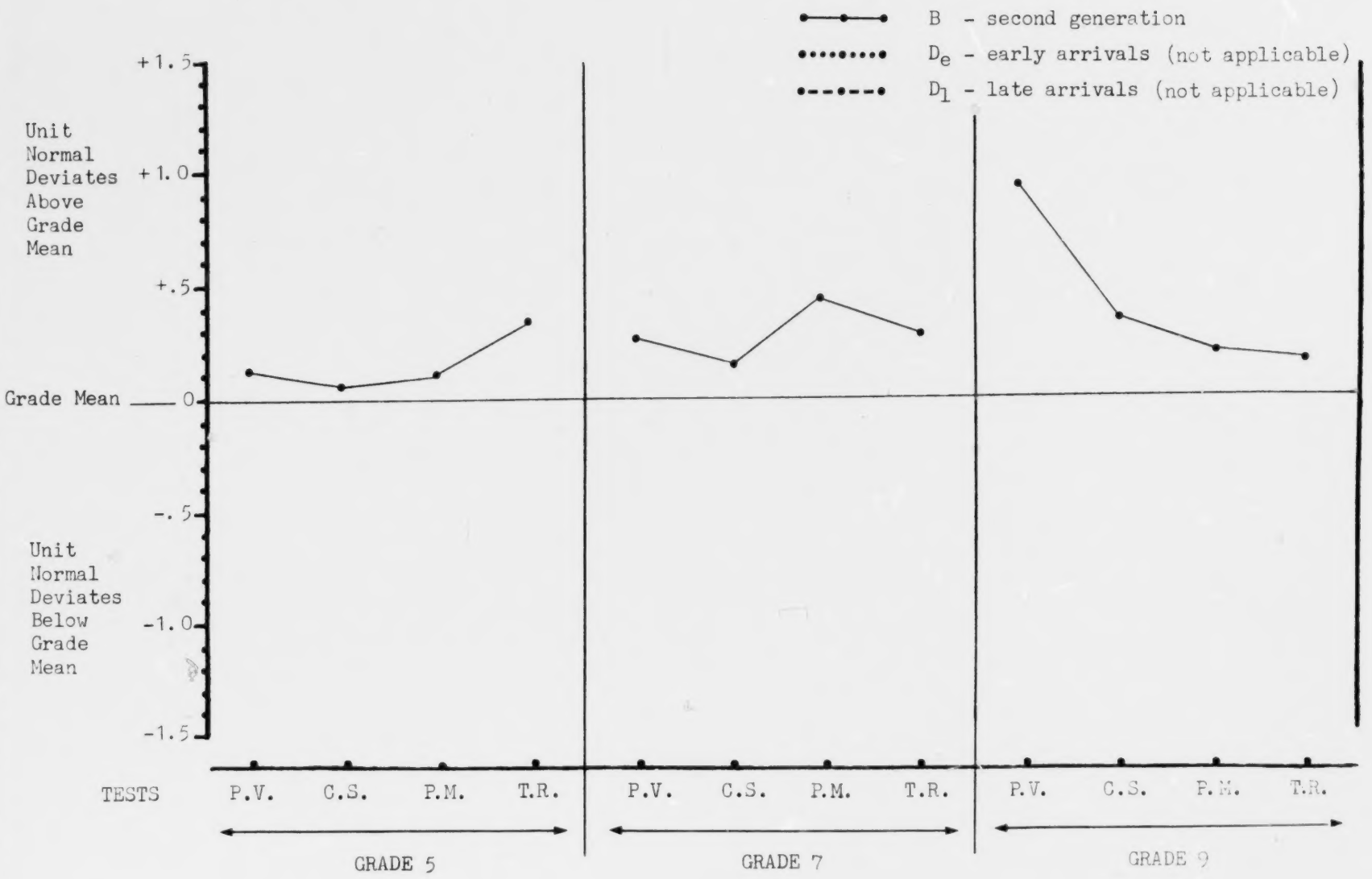

Fig. 8. Test performance of students for whom UKRAINIAN was their mother tongue. The arrangement of the four tests, P.V. (Picture Vocabulary), C.S. (Computational Skills), P.M. (Progressive Matrices), and T.R. (Teacher's Ratings of Students) is arbitrary and the points have been joined to facilitate identification of patterns of performance.

Figures 9 to 16 show the performance of each language group and the student categories within them on the remaining six measures (i.e. the subtests of English Language Skills). The differences among the language and student categories (and grades) on these six subtests must be viewed with caution as the reliability and validity of the test have not been established. For this reason the eight language groups are discussed collectively and generally, and not separately as were the first four test measures.

The six parts comprising the test of basic English skills are:

I Sound Discrimination
II Sound Recognition
III Intonation -- Meaning
IV Vocabulary
V Vocabulary -- Functors
VI Idiomatic Usage

Generally the performance of the second generation (B) group across the various languages tended to be at or slightly above the grade averages, with only a few exceptions.

Because the test was intended to tap basic skills it was expected that those students who had recently begun learning English would have some difficulty, while the rest would get perfect or near perfect scores. This was confirmed.

In the language groups where B was represented as well as D_e or D_1, (Figures 9, 11, 12, 13) it was noted that the B groups tended to outperform slightly the other groups. However, the performance of the early arrivals (D_e) also tended to be close to the level of grade averages. Thus, in Figures 11, 12 and 13, the D_e groups performed

similarly to the B groups and in some instances slightly better. In Figure 15 (Portuguese) where a B group is not represented, the D_2 groups also perform close to grade averages.

Not surprisingly, the students who were over six years old when they arrived in Canada, D_1, perform below average on this test. Much more important, the test suggests that the pattern of difficulties experienced by the Chinese (Figure 9) were unique. Using prepositions and discriminating sounds were very difficult, while getting meaning from intonation was consistently the easiest of all skills tested. For Greeks (Figure 12), Italians (Figure 13) and Portuguese (Figure 15) the grade nine students as well as the grade seven Italian students showed a pattern of increasing difficulty moving from subtest I to subtest VI with the pencil and paper portions of the test being more difficult than the oral sections.

At grade five it appeared that the test of idioms and, as with the Chinese, the intonation test were the easiest. There appeared to be somewhat less variability in averages at grade five than at grade nine.

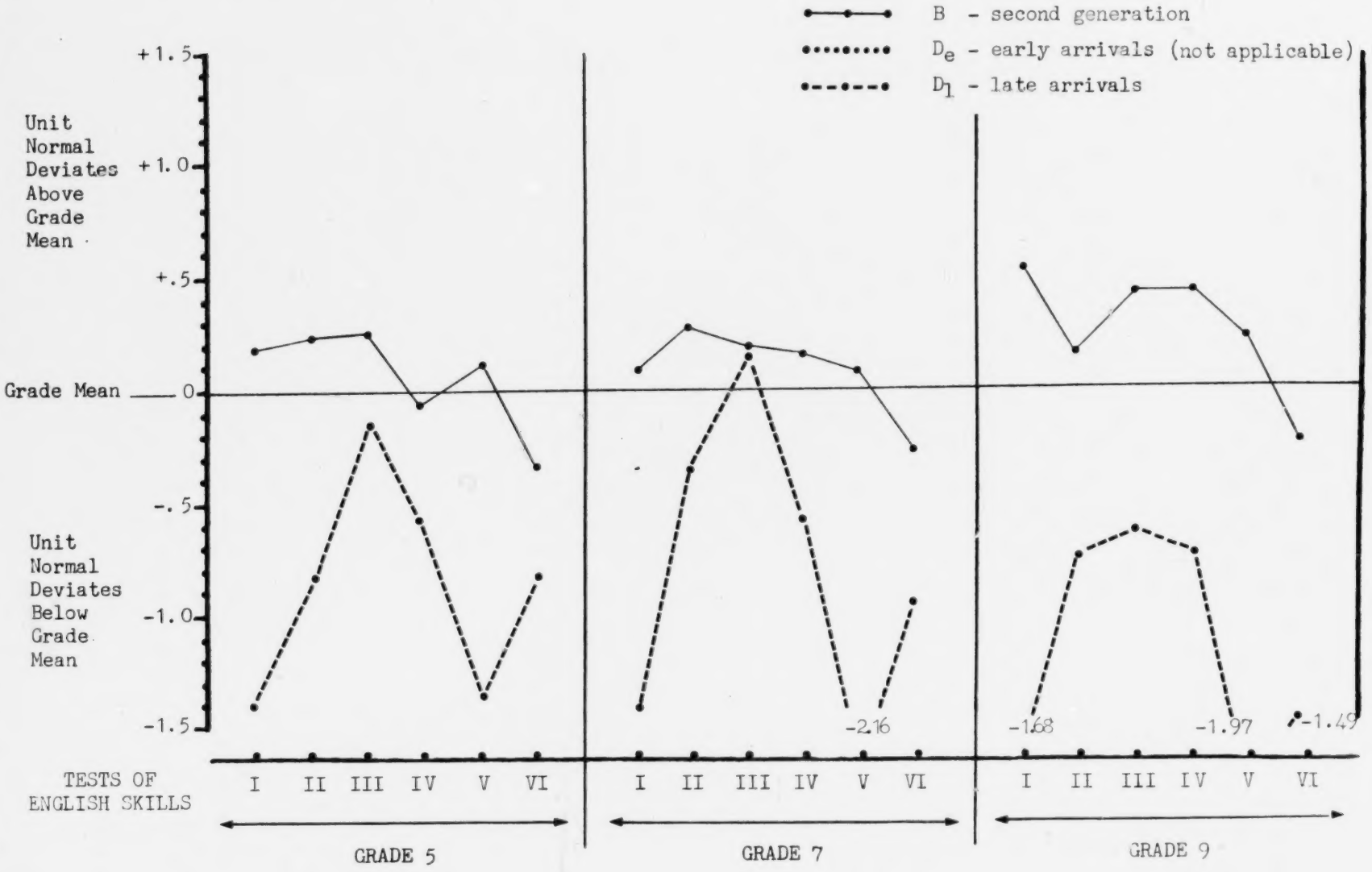

Fig. 9. Performance by students for whom CHINESE was their mother tongue. Performance is recorded for each of the separate subtests of English Language Skills. The specific subtests are identified in the text.

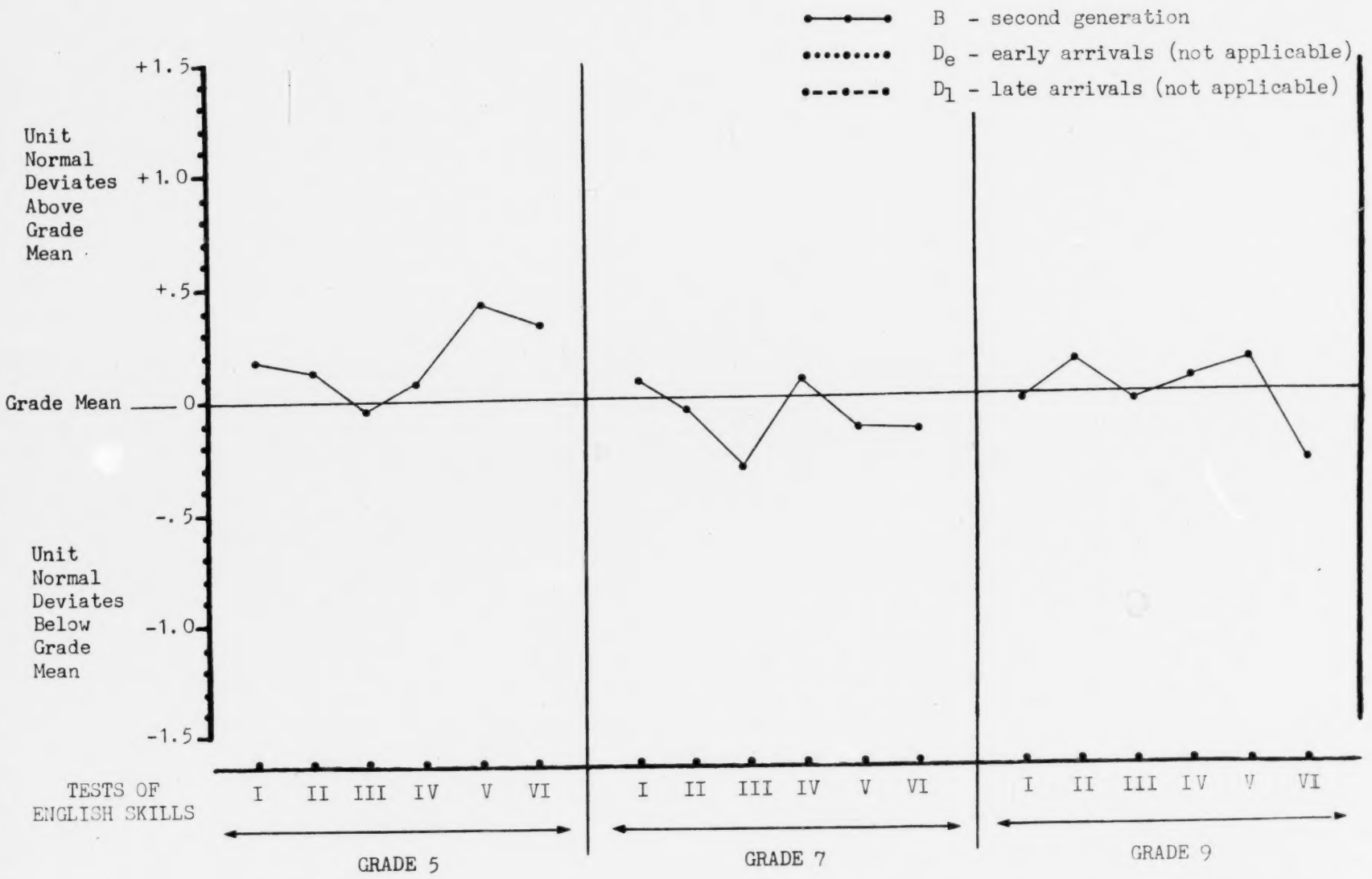

Fig. 10. Performance by students for whom FRENCH was their mother tongue. Performance is recorded for each of the separate subtests of English Language Skills. The specific subtests are identified in the text.

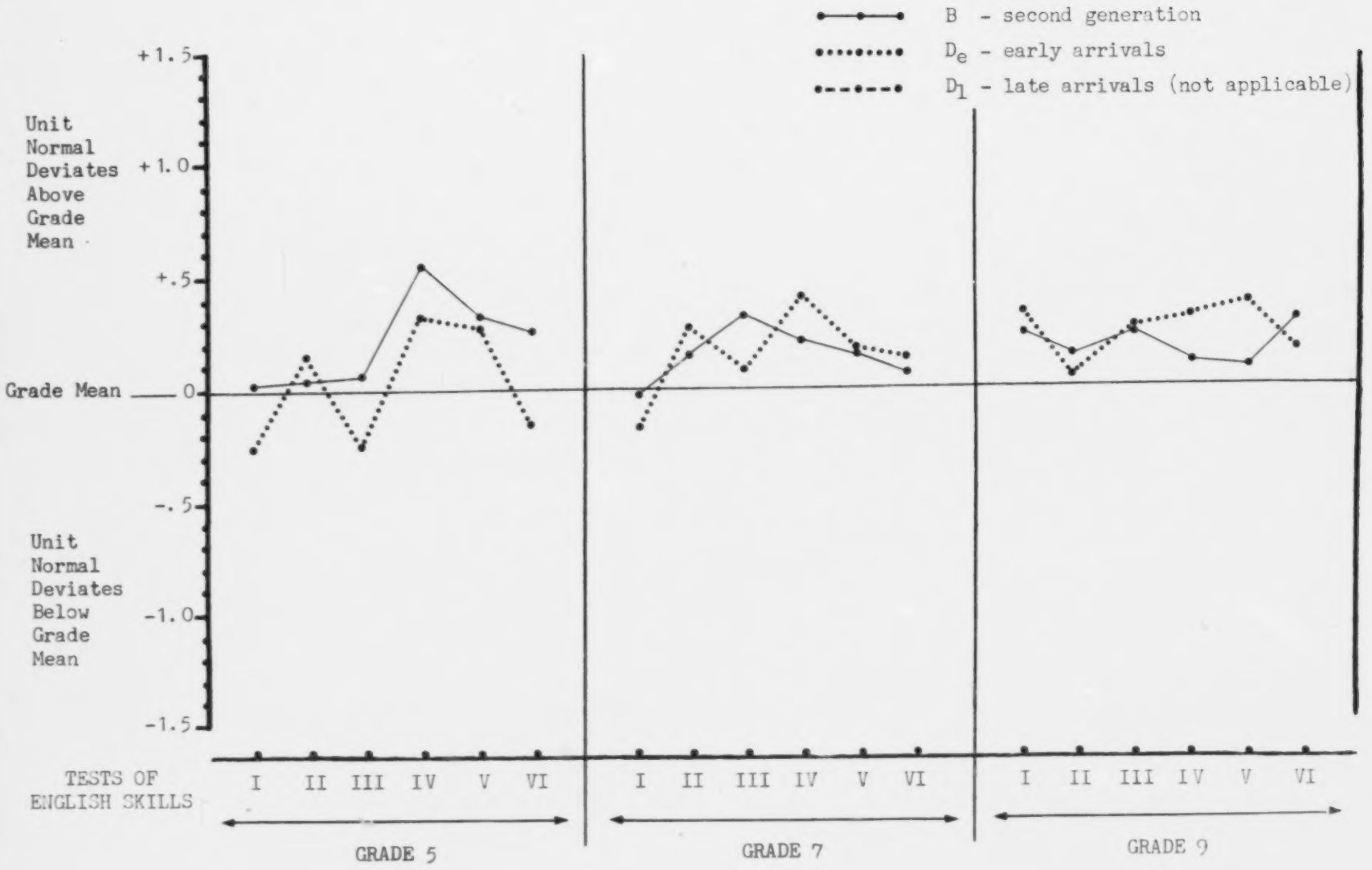

Fig. 11. Performance by students for whom GERMAN was their mother tongue. Performance is recorded for each of the separate subtests of English Language Skills. The specific subtests are identified in the text.

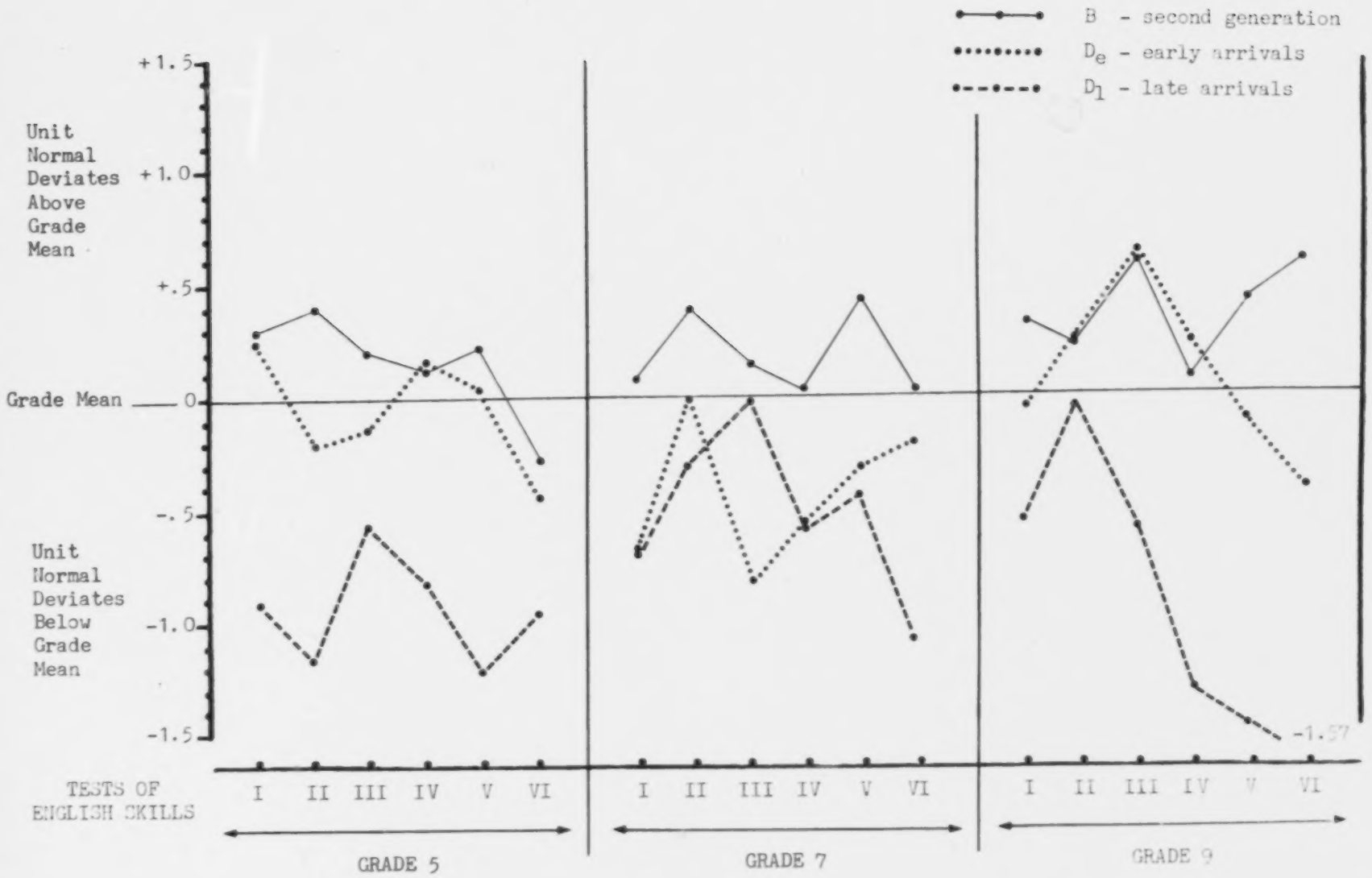

Fig. 12. Performance by students for whom GREEK was their mother tongue. Performance is recorded for each of the separate subtests of English Language Skills. The specific subtests are identified in the text.

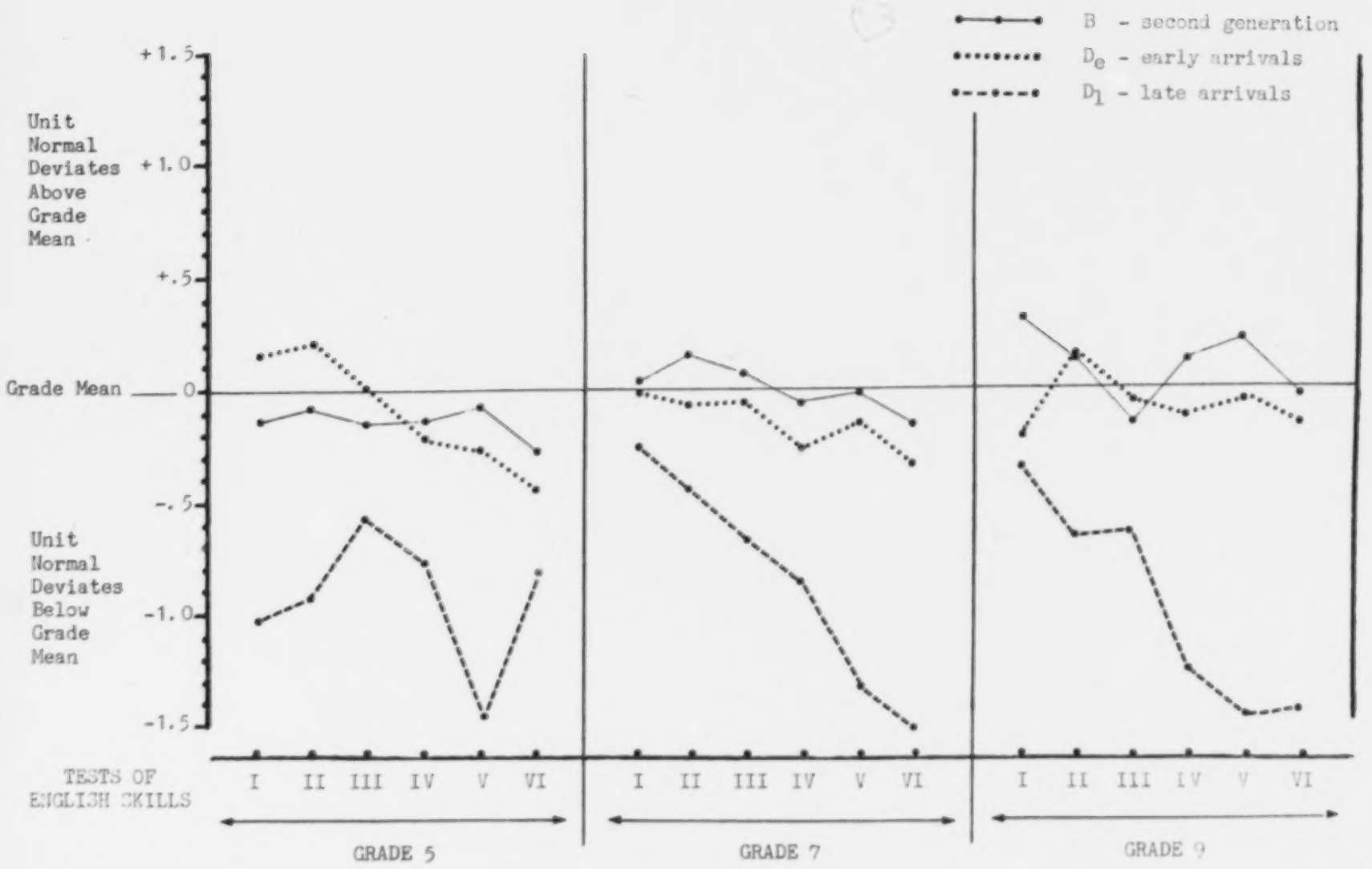

Fig. 13. Performance by students for whom ITALIAN was their mother tongue. Performance is recorded for each of the separate subtests of English Language Skills. The specific subtests are identified in the text.

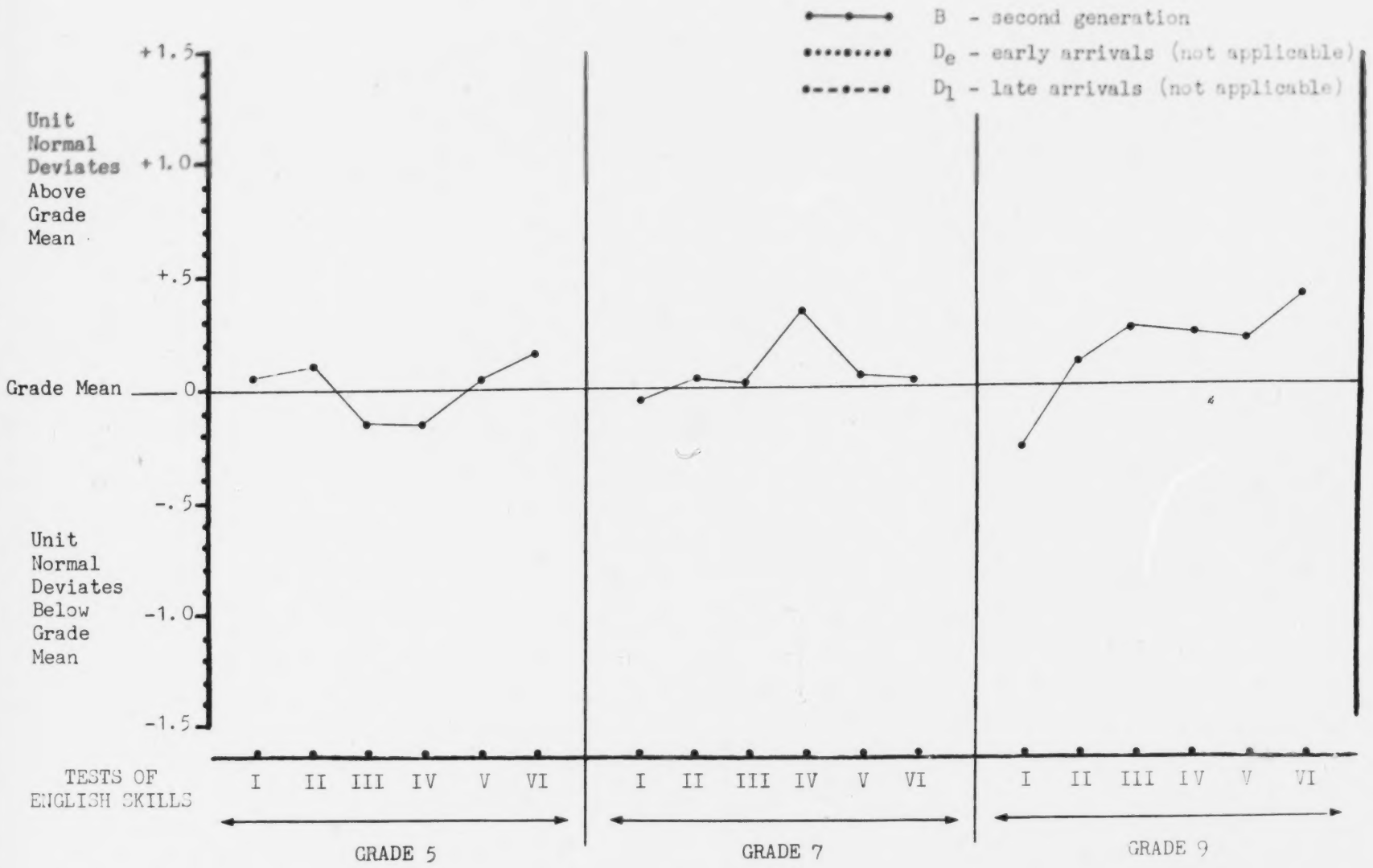

Fig. 14. Performance by students for whom POLISH was their mother tongue. Performance is recorded for each of the separate subtests of English Language Skills. The specific subtests are identified in the text.

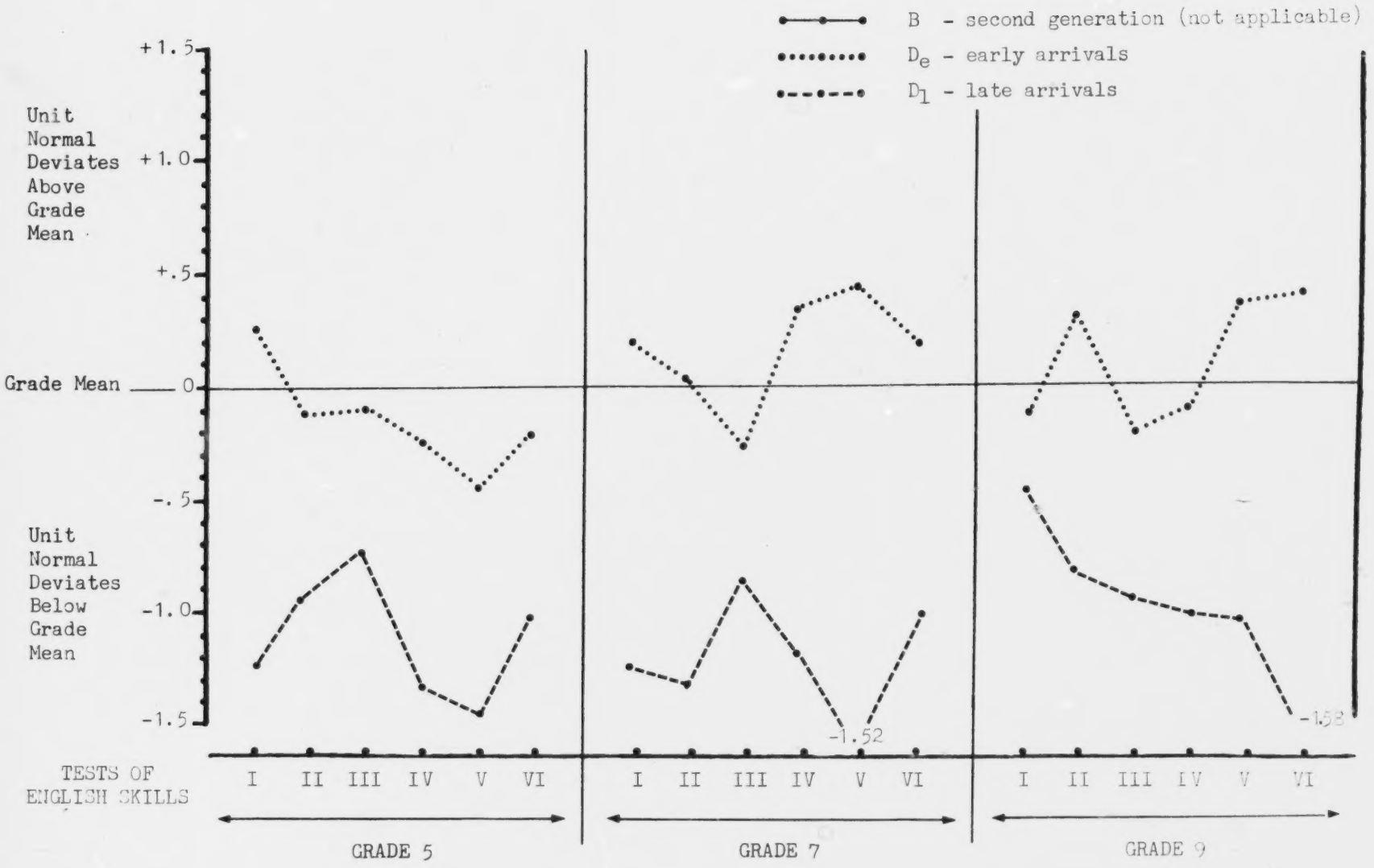

Fig. 15. Performance by students for whom PORTUGUESE was their mother tongue. Performance is recorded for each of the separate subtests of English Language Skills. The specific subtests are identified in the text.

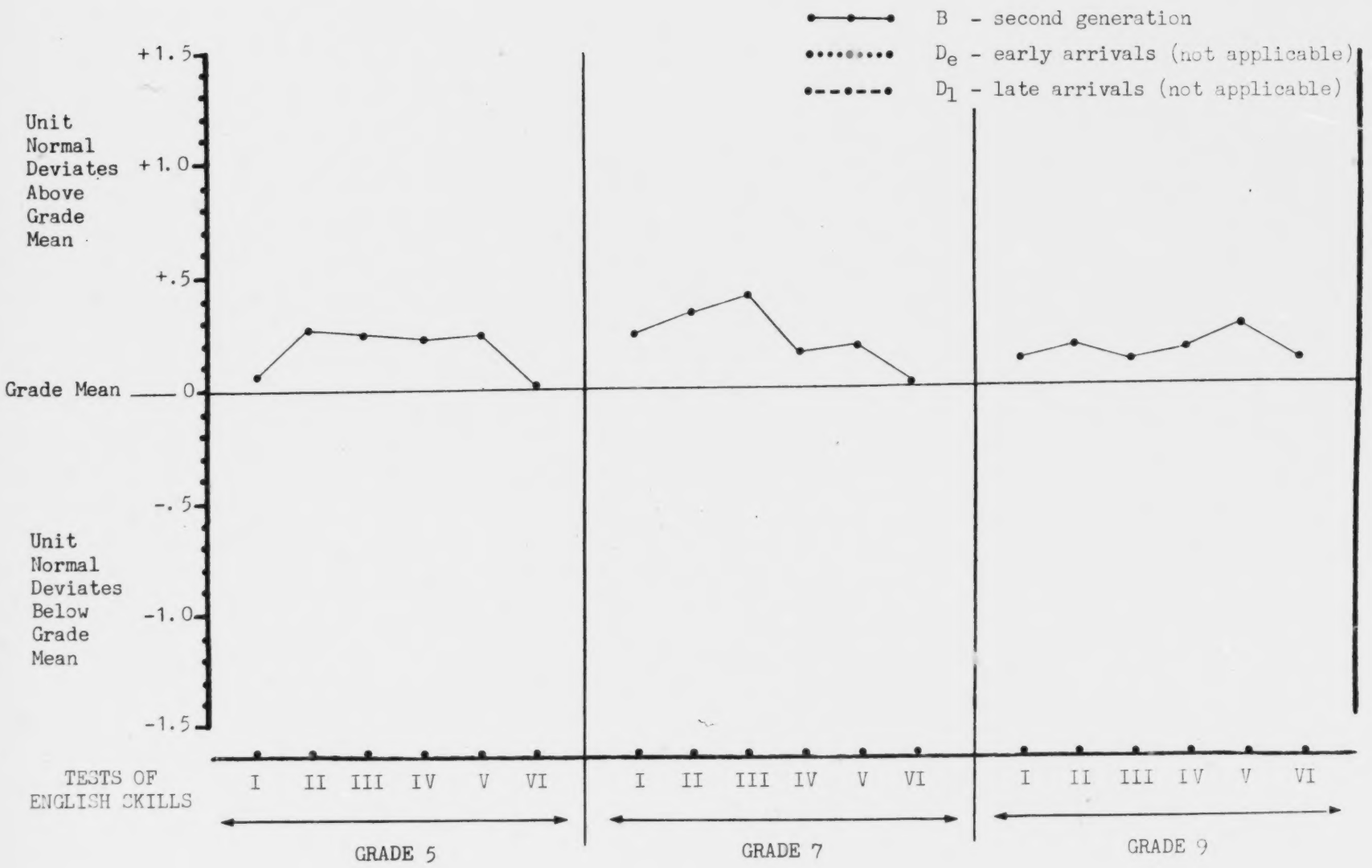

Fig. 16. Performance by students for whom UKRAINIAN was their mother tongue. Performance is recorded for each of the separate subtests of English Language Skills. The specific subtests are identified in the text.

Parental Education

Data concerning parents' education was collected to use with analyses such as have been reported here. If the average educational level of various immigrant groups differs it should be noted.

However, because a large proportion of the students responded "Don't Know," to this item on the background questionnaire, there were too few responses on which to base any estimate of the parents' average educational background.

A previous report describing non-Canadian born and Canadian born students has noted the great lack of students' information regarding their parents' education.[7] In the city-wide sample of grades five, seven and nine, the proportion of Canadian born students who responded "Don't Know" for mothers' and fathers' educational attainment was 47.0 per cent and 52.4 per cent respectively. Among non-Canadian born students the proportions were slightly higher, 50.6 per cent for mothers and 54.1 per cent for fathers.

The language groups included in this report (and the student groups within each) showed a varying but high proportion of "Don't Know" responses. Generally, the highest proportions of "Don't Know" responses were found in grade five, with slightly lower ones in grade nine. For example, in grade five, proportions in the 70 and 80 per cent ranges were common; among students who had learned Polish (Group B) 81.5 per cent reported they did not know their mothers' education and 85.2 per cent did not know their fathers' education. At the grade nine level the proportions were somewhat lower, usually ranging around 30 to 40 per cent.

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7 Ramsey, C. A., & Wright, E. N. Students of non-Canadian origin: A descriptive report of students in Toronto schools. Toronto: The Board of Education for the City of Toronto, Research Department, 1969, (#60), p. 44.

With such high proportions of uncertainty across all language groups it was not meaningful to consider or describe the small proportion of responses which did report the level of education attained by their parents.

CONCLUSION

This report was not an attempt to "pit" any one language group against another. The difference in immigration patterns would render this a fruitless exercise. Furthermore, only eight groups were selected and described. Rather, the general aim was to see, if possible, whether cultural differences produced distinct patterns of performance on a variety of measures. Thus, in terms of language background, eight cultures are represented. If a culture showed a distinctive pattern of performance this should be observable at various grade levels and for early as well as late arrivals.

The only language group which came close to displaying a distinctive pattern was the Chinese. The results generally showed that no clear patterns were observable on the basis of language alone. However, on the basis of language and student type, some patterns were discernible.

The following tendencies can be faintly perceived; grade five patterns and grade nine patterns seem to be different and grade seven patterns are a mixture of the two. This seems most apparent among the Mediterranean groups. However, three of the other language groups were only represented by "born in Canada" students. Among the three Mediterranean groups, the Greeks seemed most distinct. The general superiority of all "born in Canada" students is most apparent in grade nine, especially on the Picture Vocabulary Test.

The number of students in any one group is small and only the greatest contrasts are significant. The few observations have, therefore, been heavily qualified. The reader should spend some time studying the

figures so that he can see how consistent patterns appear at one grade level or in one comparison, and how this clear pattern disappears or changes later. The patterns of performance more than anything indicate that areas of strength and weakness vary with grade as well as with cultural background. This is most important because it suggests that the extent and nature of the difficulties for students who have learned English as a second language, differ greatly as one moves from a junior school (grade five), to a secondary school (grade nine). The general superiority of "second generation" children and the success of those who arrived in Canada at the age of six or younger is consistent with other analyses that have been reported.

APPENDIX

TABLE 3

NUMBER OF STUDENTS, CANADIAN BORN BILINGUAL (i.e. GROUP B) BY GRADE AND LANGUAGE GROUP

Languages	Mean		
	Grade 5	Grade 7	Grade 9
Arabic	0	0	0
Chinese ⟶	32	23	11
Czecho-Slovak	1	4	3
Danish	0	1	0
Dutch	4	0	1
English	---	---	---
Estonian	5	10	8
French ⟶	19	15	30
German ⟶	31	32	25
Greek ⟶	31	5	6
Hungarian	11	3	3
Italian ⟶	154	56	30
Japanese	2	8	4
Latvian	6	12	13
Lithuanian	9	11	13
Maltese	1	3	2
Norwegian	0	0	1
Polish ⟶	27	30	45
Portuguese	6	1	0
Roumanian	1	0	0
Russian	1	3	3
Spanish	0	1	0
Swedish	0	0	0
Ukrainian ⟶	46	41	63
Yiddish	4	1	6
Yugoslavian	10	3	12
Total	401	263	280

These groups (⟶) are selected for analyses in Figures 1 through 16.

TABLE 4

NUMBER OF STUDENTS, NON-CANADIAN BORN BILINGUAL EARLY ARRIVALS (i.e. GROUP D_e) BY GRADE AND LANGUAGE GROUP

Languages	Mean		
	Grade 5	Grade 7	Grade 9
Arabic	0	0	0
Chinese	5	12	9
Czecho-Slovak	0	0	0
Danish	0	0	1
Dutch	1	1	5
English	---	---	---
Estonian	0	0	0
French	3	2	5
German ⟶	14	17	32
Greek ⟶	21	16	15
Hungarian	4	7	12
Italian ⟶	68	67	89
Japanese	2	0	0
Latvian	0	0	1
Lithuanian	1	3	2
Maltese	2	1	6
Norwegian	0	0	0
Polish	7	7	14
Portuguese ⟶	32	12	12
Roumanian	0	0	1
Russian	0	1	0
Spanish	0	2	0
Swedish	1	0	0
Ukrainian	1	5	7
Yiddish	0	0	1
Yugoslavian	10	7	13
Total	172	160	225

These groups (⟶) are selected for analyses in Figures 1 through 16.

TABLE 5

NUMBER OF STUDENTS, NON-CANADIAN BORN BILINGUAL LATE ARRIVALS (i.e. GROUP D_1) BY GRADE AND LANGUAGE GROUP

Languages	Mean		
	Grade 5	Grade 7	Grade 9
Arabic	0	2	1
Chinese ⟶	13	20	31
Czecho-Slovak	0	0	3
Danish	0	1	0
Dutch	2	0	0
English	---	---	---
Estonian	0	0	0
French	4	2	10
German	8	2	11
Greek ⟶	33	13	28
Hungarian	6	2	7
Italian ⟶	79	34	71
Japanese	1	0	0
Latvian	0	0	0
Lithuanian	0	0	0
Maltese	1	2	4
Norwegian	0	0	0
Polish	7	7	20
Portuguese ⟶	42	32	40
Roumanian	0	0	0
Russian	0	1	2
Spanish	5	5	5
Swedish	0	0	1
Ukrainian	2	1	5
Yiddish	0	0	1
Yugoslavian	12	12	11
Total	215	136	251

These groups (⟶) are selected for analyses in Figures 1 through 16.